

Techniques to Enhance Relaxation and Minimize Brain Retraction during Surgery

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Introduction

tense brain tissues and extensive retraction are of the most important factors leading to intraoperative and postoperative complications including contusion, hemorrhage and incomplete resection of brain tumors.

Methods

we hereby present our experience how to maximize intraoperative exposure field of a lesion with minimal use of retractors. We emphasize proper positioning of the patient and early CSF drainage as well as using micro-instruments as dynamic retractors to avoid excessive retraction with brain spatulas. Regarding positioning, zygoma of patients with anterior and middle skull base lesions should be the highest point in neutral position before head rotation. Tumor should be the highest point in patients with parasagittal, falcine and convexity lesions. Early CSF drainage, piecemeal excision and dissection in cleavage planes will also help maximizing exposure with minimal retraction.

Results

Most of the Skull base tumors could be dealt with successfully intraoperatively without brain retraction using only these simple technniques

Conclusions

Simple tips such as proper positioning, CSF drainage and dynamic retraction will enhance brain relaxation providing maximum exposure of a lesion with minimal brain retraction

Learning Objectives

This subject is directed mainly to young residents and fellows to learn them how to avoid extensive retraction of brain tissues during surgery to avoid its associated complications especially postoperative hematomas and contusions.

References